

**DRAWING AMENDMENTS (Other than Those Requested on Form PTO-948)**

A replacement FIG. 1 (labeled “Replacement Sheet” in the top margin) accompanies this Response to address the issues raised in Section 2 of the Office Action.

**REMARKS**

**1. Examiner's Interview**

The undersigned attorney appreciates the telephonic interview provided by Examiners Gilbert Lee and Jennifer Gay on December 14 and 16, 2009 concerning the May 22, 2009 Office Action and subsequent September 22, 2009 Response. The discussion primarily focused on the content of this Office Action and Response, though many of the drawing objections and §112 issues of the subsequent / present (December 30, 2009) Office Action were also discussed. As per discussions during the Interview, these current objections and rejections are believed to be addressed by the accompanying amendments, and the comments below.

**2. The Amendments and the Support Therefor**

Five claims are canceled (2, 3 and 5-7), five new dependent claims (35-39) are added, and claims 1, 16, 22, 27, 28, and 30 are amended to leave claims 1, 16, 18, 19, and 21-34 in the application. No fees are due for the newly-added claims because an equivalent number of claims are canceled. No new matter has been added by the amendments and new claims, wherein:

- *Independent claim 1* has been amended to incorporate claims 3 and 5 (now canceled).

- **Independent claim 16** has been amended to more clearly recite the arrangement shown and described at (for example) FIGS. 1-3, which clearly depict the bent cells, and page 2 line 16-page 3 line 13:

Accordingly, the present invention provides a pressure pad comprising at least two sets of alternately inflatable cells, the cells extending linearly transversely along the pad and held in place on a pad base by retaining means, *characterised in that the retaining means hold the cells in tension across the pad.* . . . . In a preferred embodiment the retaining means secure the opposite ends of each cell at a predetermined distance from the centre linear axis of the cell. . . . In the preferred embodiment, *the retaining means comprise loop straps fixed to the pad base retaining the central region of each cell and hook type fasteners retaining each opposite end of the cell.* . . . . *The resulting cell axis is a curve creating a more stable structure and has been seen to dramatically reduce the movement of a user along the pad with improved user comfort and enhanced pressure relief.*

(Emphasis added.)

- **Claim 22** has been amended to depend from claim 16.
- **Claim 28** has been amended to clarify that the recited restrained and unrestrained states occur while the cells are inflated (as illustrated in FIG. 3, as amended with the Response of August 29, 2008);
- **Independent claim 27** and **claim 30** have been amended to address the §112 rejections at Section 7 of the Office Action, with support being found (for example) at page 2 line 16-page 3 line 13 (reproduced above), and in FIG. 1 (showing the curved cells 2 sitting atop the pad base 12).
- **New claims 35-39** find support in (for example) FIGS. 1-3, showing loops 1 restraining the cells at their midsections and fasteners 20 restraining the cells at their terminal ends, and by page 2 line 16-page 3 line 13 (cited above in regards to claim 16).

### 3. Section 2 of the Office Action: Objections to the Drawings

A replacement FIG. 1 accompanies this response, with all cells 2, cell ends 3, and anchors 20 now being uniformly shown (and with the cell ends 3, anchors 20, and pad base 12 shown in conformance with FIG. 3).

**4. Sections 3-4 of the Office Action: Rejections of Claims 1-3, 5-8, 21, and 22 under 35 USC §112(1)**

Claim 1 (and thus its dependent claims) are amended to delete the objected “urge” language, as suggested in the Examiner’s Interview Summary accompanying the Office Action. Thus, these rejections are believed to be overcome.

**5. Section 5 of the Office Action: Rejections of Claims 6-7 under 35 USC §112(1)**

These rejections are mooted by cancellation of these claims.

**6. Section 6 of the Office Action: Rejections of Claims 16, 18, 19, and 26 under 35 USC §112(1)**

Similarly to claim 1, claim 16 (and thus its dependent claims) is amended to delete the objected “urge” language, thereby addressing these rejections.

**7. Section 7 of the Office Action: Rejections of Claims 27-33 under 35 USC §112(1)**

Regarding claim 27, FIGS. 1-3 of the application clearly depict cells curving along their lengths. The disclosure discusses linear cells, but also clearly shows and describes the linear cells being bent in a curved state. See, for example, the drawings and passages cited in the foregoing Section 2 of this Response (FIGS. 1-3, which clearly depict the bent cells, and page 2 line 16-page 3 line 13). Thus, these rejections should be withdrawn.

Regarding claim 30, the specification clearly describes the cells being bent by the loops 1 and anchors 20, which also restrain the cells to the pad 12 beneath (as shown in FIG. 1). Claim 30 has been amended to clarify that the curves of the cells are not coplanar with the pad base, but are rather in a parallel plane (since the cells rest atop the pad base), and thus claim 30 complies with 35 USC §112(1).

**8. Section 8 of the Office Action: Rejections of Claim 34 under 35 USC §112(1)**

This rejection is erroneous and should be withdrawn. Recall from preceding Section 2 of this Response that page 2 lines 26-29 note that:

In a preferred embodiment the retaining means secure the opposite ends of each cell at a predetermined distance from the centre linear axis of the cell. . . .

Then see, for example, page 3 lines 25-32 of the application:

FIG. 1 shows a plan view of a pad 10 comprising a bank of interleaving linear cells 2 extending transversely of the pad 10. As shown in FIGS. 1 and 2, loop straps 1 hold the central section of the cells 2 linearly in parallel with the cell axis 11 whereas the opposite ends 3 of the cells 2 are secured a pre-determined distance 4 off-set from the cell axis 11. *The distance 4 can vary along the length of the pad.*

(Emphasis added.) Clearly, if the ends of different cells are offset at different distances from the cell axes, these different cells are going to be bent to different degrees. See also original FIG. 1.

**9. Section 9 of the Office Action: Rejection of Claims 1-3 and 5-7 under 35 USC §102 in view of U.S. Patent 6,349,439 to Cook et al.**

U.S. Patent 6,349,439 to Cook illustrates a pressure pad (as in FIG. 1) having sets of alternately inflatable cells 1 and 2 wherein each cell is retained atop a base sheet 3 (seen in FIG. 3) by loops 4 (FIG. 1); see column 2 lines 53-55. Several loops 20 at one end of the pad are elastic, whereby these loops exert radial force on their cells to accelerate deflation (column 2 lines 56-67). FIG. 2 illustrates an alternative embodiment wherein cells are encased in sleeves 10 which are in turn held by elastic loops 20 to attain the same effect (column 3 lines 6-17).

FIGS. 4 and 5A-5C of Cook then illustrate an arrangement for retraining the base sheet 3 (and thus the cells 1 and 2 above) to a bed, wherein securing straps (21 in FIG. 4, 21a in FIGS. 5A/5B, and 21c in FIG. 5C) extend from the edges of the base sheet 3 to a portion of the bed (shown unlabeled in FIGS. 5A-5C); see column 3 lines 41-57. The straps 21 include loops 21a (FIGS. 5A/5B) or folds 21c (FIG. 5C) which expand to avoid tension on the straps 21 (and thus on the base sheet 3). When a patient lies on the cells of FIG. 5A, the edges of the pad may bend upwardly away from the base sheet 3 as seen in FIG. 5B as the center of the pad is pushed downwardly. In this case, the loops/folds 21a and 21c can open/unfold (as in FIGS. 5B-5C) to accommodate the bending of

the pad without tearing the straps 20 off of the bed (see column 3 lines 53-57).

Anticipation under 35 U.S.C. § 102(b) requires that each and every limitation recited by the claim be found in a single prior art reference (MPEP 2131), a condition which is not present here. See also *Net MoneyIN Inc. v. VeriSign Inc.*, 88 USPQ2d 1751, 1758-1759 (Fed. Cir. 2008) (“We thus hold that unless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. § 102.”)

Here, *claim 1* recites that “such that each cell is tensioned along the cell’s length, with the cell’s length being held in a bent state by the loop straps and fasteners.” In *Cook*, the cells are not tensioned along their lengths – in fact, FIGS. 4 and 5A-5C of *Cook*, and the loops 21a (FIGS. 5A/5B) and folds 21c (FIG. 5C) therein, are specifically included to *avoid* tension – nor are the cells’ lengths held in a bent state by loop straps and fasteners. As discussed below, neither *Cook* nor the other references of record describe tensioning of the cells along their lengths, nor is there any apparent reason why one of ordinary skill would contemplate such tensioning, which (as noted in the specification passages cited in the foregoing Section 2) “has been seen to dramatically reduce the movement of a user along the pad with improved user comfort and enhanced pressure relief.” As discussed below, there is absolutely nothing in the art that suggests that tensioning cells – and in particular tensioning curved cells – would yield such a benefit.

**10. Section 10 of the Office Action: Rejection of Claims 27-33 under 35 USC §102 in view of GB 2,319,721 to Chapman et al.**

*Chapman et al.* illustrates the pads discussed in the Background section of the present application, particularly at page 2 lines 4-10:

It is known to have non-linear cells, but there is still some movement of the user down the pad and also rotation of the cells during support of the user in the seated position. Furthermore, the non-linear cells are difficult to manufacture with problems of creases within their inner curvature compromising their pressure relief performance.

The matter of independent claim 27 (and thus its dependent claims 28-33) is not disclosed in *Chapman et al.* Claim 27 recites that the lengths of the cells are tensioned, and *Chapman* does not

disclose such an arrangement, as nothing pulls on the lengths of *Chapman*'s cells. Further, there is no apparent reason why an ordinary artisan would implement such an arrangement with *Chapman*, and in fact it seems that one would not do so, since *Chapman*'s cells are permanently formed in the depicted curved state, and subjecting them to tension would tend to pull them straight (and thereby defeat the intention of the curvature, which is to "provide[] a greater length of each cell in contact with the body with improved comfort since more of the patient is supported at any one time" (*Chapman* at page 2 lines 29-30).

*Chapman* also neither discloses nor renders obvious claim 28, since (as noted above) *Chapman*'s cells are permanently formed in the depicted curved state, and remain in this curved state whether restrained together as a pad or otherwise.

*Chapman* also neither discloses nor renders obvious claim 33, since *Chapman* uses no restraining loop, nor is there any apparent reason why an ordinary artisan would consider use of a central loop.

**11. Section 11 of the Office Action: Rejection of Claims 1-3, 5-7, 16, 18, 19, and 21-26 under 35 USC §103 in view of U.S. Patent 6,349,439 to Cook et al. and GB 2,319,721 to Chapman et al.**

Independent claims 1, 16, and 23 – from which all remaining rejected claims depend – recite that the cells are tensioned along their lengths, a feature which is not present in either of *Cook et al.* or *Chapman et al.*, and which would not be contemplated by an ordinary artisan after review of these references (and/or the art in general). *Cook et al.* simply restrains a series of linear cells to a pad by means of loops spaced along the lengths of the cells, and extending about the circumferences of the cells; the ends of the cells are not restrained or otherwise subjected to any pulling/tensioning force. As noted by the Office Action, *Chapman et al.* states that curved cells "provide[] a greater length of each cell in contact with the body with improved comfort since more of the patient is supported at any one time" (*Chapman* at page 2 lines 29-30). However, even if an ordinary artisan was to curve the *Cook et al.* cells, as by offsetting *Cook et al.*'s central loops 5 (FIG. 1) with respect to its outer loops 9 (e.g., moving central loops upwardly in FIG. 1 while moving outer loops 9

downwardly), the lengths of the cells still would not be subjected to any pulling force or restraint, such that the cells would be tensioned along their lengths. If the cells were so tensioned, something would need to restrain them at their cell ends, else the cells would simply slide through the loops to release the tension – but there’s no evident reason why an ordinary artisan would implement such end restraints, since simply curving the *Cook et al.* cells would attain all goals allegedly suggested by *Chapman et al.* There is simply no apparent reason why an ordinary artisan would somehow modify such a *Cook et al.* / *Chapman et al.* combination to tension the cells along their lengths.

It is also notable that both *Cook et al.* (e.g., at column 1 lines 25-28) and *Chapman et al.* (at page 1 lines 28-31) note that high cell pressures cause the cells to become uncomfortably rigid to patients. If *Cook et al.*’s cells were tensioned along their lengths, this would effectively make them more rigid as they cells are pulled taut – and thus tensioning the *Cook et al.* cells along their lengths is seemingly contrary to both *Cook et al.* and *Chapman et al.*.

Thus, since there is no apparent reason to tension the lengths of the cells as claimed, and since such a measure is also contrary to both *Cook et al.* and *Chapman et al.*, independent claims 1, 16, and 23, as well as their dependent claims 18, 1, 21, 22, 25, and 26 are submitted to be unobvious.

**12. Section 12 of the Office Action: Rejection of Claim 33 under 35 USC §103 in view of GB 2,319,721 to *Chapman et al.* and U.S. Patent 6,349,439 to *Cook et al.***

Claim 33 is submitted to be allowable for at least the same reasons as those noted in the foregoing Section 11 of this Response, namely, claim 27 – parent to claim 33 – recites that the lengths of the cells are tensioned, a feature which is not present in, nor obvious in view of, *Chapman et al.* and/or *Cook et al.*.

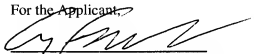
**13. In Closing**

If any questions regarding the application arise, please contact the undersigned attorney. Telephone calls related to this application are welcomed and encouraged. The Commissioner is authorized to charge any fees or credit any overpayments relating to this application to deposit account number 18-2055.

**ATTACHMENTS / ENCLOSURES:**

- Replacement FIG. 1

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